

SN 10/010,294

REMARKS

In the "Final" Office Action dated June 16, 2003, claims 1, 11, 12, 19 and 23 are rejected under 35 U.S.C. §102(e). Claims 2-10, 13-18, 20-22, and 24-27 are rejected under 35 U.S.C. §103(a).

For the reasons set forth hereafter, however, it is respectfully submitted that Applicants' invention as set forth in claims 1-27 includes features which are not anticipated or rendered obvious by the references cited by the Examiner. Reconsideration is, therefore, respectfully requested.

Claims 1, 11, 12, 19 and 23 are rejected under 35 U.S.C. §102(e) as being anticipated by Rose et al. The Examiner contends that Rose teaches all of the elements of Applicants' invention as set forth in each of these claims.

However, for the reasons set forth hereafter, it is respectfully submitted that Applicants' invention as set forth in independent claims 1, 12, 19 and 23 includes features which are not anticipated by Rose.

Each of claims 1, 12, 19 and 23 have been amended to include the features of a subsequent claim which defines at least one radially extending projection on an electrically conductive body which is adapted to engage the endform when the endform is mounted in the bore in the connector housing. It is respectfully submitted that Rose is devoid of any teaching or suggestion of any such projection on an electrical contact member.

Rose discloses a fuel-line coupling wherein the outer surface of a connector plug and the inner surface of a connector housing are lined with a conductive metallic layer. An electrically conductive O-ring seal member is mounted in a bore in the connector housing and engages the outer metallic surface of the plug when the plug is mounted in the housing to provide electrical contact between the plug and the housing.

However, the O-ring seal member of Rose is not a spacer or a top hat as set forth by the Applicants in the independent claims 1, 12, 19 and 23. The spacer in Applicants' invention is a separate member employed with an O-ring seal similar to that of Rose. Likewise, the top hat defined by the Applicants is used in a fluid connector, such as that disclosed in Rose, to hold the seal and spacer elements in the bore in the housing after the endform is removed from the housing. The spacer and the top hat are completely different structural elements from the O-ring seal of Rose.

SN 10/010,294

Both the spacer and the top hat have a rigid construction as compared to the resilient sealing material used to form the O-ring of Rose. Since the ID of the O-ring of Rose is normally made slightly smaller than the OD of the plug so as to cause an expansion of the O-ring when the plug is inserted through the O-ring bringing the OD of the O-ring into engagement with the inner surface of the surrounding bore in the connector housing to provide a seal in the bore, there is no teaching in Rose of at least one radially inward extending projection on an electrically conductive annular body as acknowledged by the Examiner in the following rejection.

For these reasons, it is respectfully submitted that Applicants' invention, set forth in claim 1, 11 which depends from claim 1, and claims 12, 19 and 23, includes features which are not taught by Rose.

Claims 2-10, 13-18, 20-22 and 24-27 are rejected under 35 U.S.C. 35 U.S.C. §103(a) as being unpatentable over Rose in view of Kot. The Examiner notes that Rose does not disclose placing a plurality of radially inward extending projections on the O-ring. The Examiner cites Kot for placing four circumferentially spaced inward projections on a spacer which contact an endform under tension to increase the electrical contact between the mating components. From this, the Examiner concludes that it would have been obvious to one of ordinary skill in the art to modify the electrically contacting O-ring of Rose to include inwardly facing radial projections as taught by Kot in order to improve the electrical conductivity of Rose.

However, it is respectfully submitted that Applicants' invention as set forth in claims 1, 12, 19 and 23, which have been amended to include the features of claims 2, 13, 20, and 24, as well as claim 16 includes features which are not suggested by any permissible combination of Rose and Kot as posed by the Examiner.

Kot discloses an armored cable connector in which a watertight clad cable includes a helical wound metal conduit covered by a flexible plastic waterproof sheath. The waterproof sheath is stripped from an end of the inner metal conduit, with the exposed end inserted into a connector housing into engagement with a split grounding collar formed of a metallic material which nests in the front end of the bore of the connector housing. A plurality of peripherally spaced resilient contact fingers project forwardly and radially inwardly from the rear edge of the collar to engage the exposed metal conduit.

However, it is respectfully submitted that the Examiner has not established *prima*

facie

case of obviousness to support a legitimate combination of Rose and Kot. Rose is directed to a fluid quick connector. Kot, on the other hand, is directed to an armored electrical cable. Kot requires that the outer plastic sheath be stripped from the end to expose the inner metal conduit to enable the split ring to contact the metal conduit in the connector housing.

It is respectfully submitted that one of ordinary skill in the art of fluid quick connectors would not be motivated by the teachings of Kot to apply a resilient rubber or elastomeric O-ring with a plurality of angularly disposed fingers on the O-ring of Rose since any further radially inward extending projections would make insertion of the endform through the O-ring in the connector housing much more difficult by increasing the insertion resistance. This is due to the nominally undersized inner diameter of the O-ring which is expanded by the slightly larger outer diameter of the endform when the endform is inserted through the O-ring in the bore in the housing. The interfering inner diameter of the O-ring and the outer diameter of the endform in Rose would negate any need to add additional radially inward extending projections as taught by Kot.

Further, the O-ring of Rose is formed of a resilient material. The split ring of Kot is necessarily formed of a metallic material so as to maintain the fingers at the desired angular position to provide tension and secure contact with the metal conduit. Making any additional inward extending projections on the resilient O-ring of Rose, is posed by the Examiner through the combination of Kot with Rose, would place the projections in the insertion path of the endform and significantly increase the insertion force resistance making a complete insertion of the endform into the bore in the housing through the O-ring extremely difficult and a fully sealed insertion uncertain. At the same time, the insertion of the endform through any such projections created on the O-ring of Rose would bend the projections out of the plane of the O-ring and possibly negate the effectiveness of the projections since the O-ring is formed of a resilient material. As such, the use of such projections on the O-ring of Rose would be redundant and unnecessary.

For these reasons, it is respectfully submitted that the Examiner has not made a *prima facie* case of obviousness to support a permissible combination of the teachings of Rose and Kot to negate the patentability of Applicants' invention as set forth in claims 2, 13, 20 and 24, the subject matter of which has been incorporated into claims 1, 12, 19 and 23. This lack of legitimate combination is further evidenced by the different functions served by the O-ring seal of Rose and the

SN 10/010,294

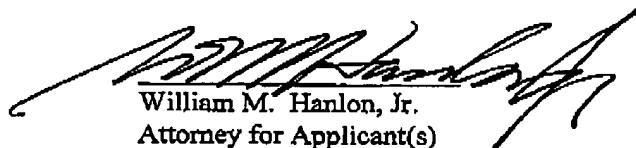
rigid split collar of Kot. The two elements are different in structure and function so as to negate their combination as posed by the Examiner.

For the above reasons, it is respectfully submitted that Applicants' invention as set forth in claims 3-10, 14-18, 21, 22 and 25-27 patentable defines over any permissible combination of Rose and Kot.

In conclusion, it is respectfully submitted that Applicants' invention as set forth in claims 1, 3-12, 14-19, 21-23 and 25-27 includes features which are not anticipated or rendered obvious by the cited references, taken in any permissible combination. Accordingly, it is respectfully submitted that such claims are in condition for allowance; a notice of which is respectfully requested.

Respectfully submitted,

YOUNG, BASILE, HANLON, MacFARLANE, WOOD &
HELMHOLDT, P.C.



William M. Hanlon, Jr.
Attorney for Applicant(s)
Registration No. 28,422
(248) 649-3333

3001 West Big Beaver Rd., Suite 624
Troy, Michigan 48084-3107
Dated: August 18, 2003
WMH/cao/p